

REMARKS/ARGUMENTS

Claims 6-12 are pending in this application.

Claims 6-12 were rejected under 35 U.S.C. §112, second paragraph, for allegedly being indefinite. Particularly, the Examiner alleged, "The claims describe the characteristics of the plate-shaped element but never cite the material of the element. A routineer in the art would have no idea whether or not he would be infringing on the language of a patent that had the Applicant's language since any material that meets the characteristics is applicable." Applicant respectfully disagrees.

There is absolutely no requirement whatsoever under U.S. patent law that a claim be unnecessarily limited by reciting a specific material. It is clearly proper to define a specific material by the function and/or properties that the material performs and/or possesses. As set forth in MPEP § 2173.05(g), the Examiner is reminded that "There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. *In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971)."

Applicant's Claim 6 recites the feature of "a rectangular plate-shaped element including a functional part and a first frame-shaped electrode surrounding the functional part, wherein the coefficient of linear expansion in the x direction along a side of the rectangle is different from the coefficient of linear expansion in the y direction orthogonal to the x direction in the rectangular plane." Applicant respectfully submits that his feature is clear and definite, and that one of ordinary skill in the art could easily determine from the claimed feature that any material having different coefficients of linear expansion in the x and y directions would read on this feature. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this rejection.

Claims 6-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaida (U.S. 5,302,880) in view of Shinoda (JP 57-60717). Applicant respectfully traverses the rejection of Claim 6-12.

Claim 6 recites:

An electronic component device comprising:
a rectangular plate-shaped element including a functional part and **a first frame-shaped electrode** surrounding the functional part, wherein the coefficient of linear expansion in the x direction along a side of the rectangle is different from the coefficient of linear expansion in the y direction orthogonal to the x direction in the rectangular plane;
a substrate including **a second frame-shaped electrode** arranged on a front face of the substrate at a position so as to correspond to the first frame-shaped electrode; and
a solder sealing frame provided on the surface of at least one of the first frame-shaped electrode and the second frame-shaped electrode; wherein
each of the first frame-shaped electrode, the second frame-shaped electrode, and the solder sealing frame includes a strip-shaped portion extending in the x direction and a strip-shaped portion extending in the y direction;
the element and the substrate are bonded together with the solder sealing frame, the functional part provided on the element is hermetically sealed in a space formed between the element and the substrate; and
when the difference in expansion in the x direction between the element and the substrate is represented by Q_x and the difference in expansion in the y direction between the element and the substrate is represented by Q_y , in each of the first frame-shaped electrode, the second frame-shaped electrode, and the solder sealing frame, a width of the strip-shaped portion extending in the direction having the larger difference in expansion is smaller than a width of the strip-shaped portion extending in the direction having the smaller difference in expansion. (emphasis added)

Applicant's Claim 12 recites features that are similar to the features recited in Applicant's Claim 6, including the above-emphasized features.

With the unique combination and arrangement of features recited in Applicant's Claims 6 and 12, including the feature of "a first frame-shaped electrode, "a second frame-shaped electrode," and " when the difference in expansion in the x direction between the element and the substrate is represented by Q_x and the difference in expansion in the y direction between the element and the substrate is represented by Q_y , in each of the first frame-shaped electrode, the second frame-shaped electrode, and

the solder sealing frame, a width of the strip-shaped portion extending in the direction having the larger difference in expansion is smaller than a width of the strip-shaped portion extending in the direction having the smaller difference in expansion,” Applicant has been able to provide an electronic component device satisfying the lifetime for thermal shock resistance required for general electronic component devices and having excellent reliability. (see, for example, paragraph [0005] of the Substitute Specification).

The Examiner alleged that Kaida teaches all of the features recited in Applicant’s Claims 6 and 12, except for a solder sealing frame and a surface acoustic wave device. The Examiner further alleged that [Shinoda] teaches the “use of solder for sealing an electronic package containing a piezoelectric resonator, which description includes both high frequency devices and surface acoustic wave devices.” Thus, the Examiner concluded, “It would have been obvious to one having ordinary skill in the art to employ the solder material of [Shinoda] in the device of Kaida since this is an excellent design to allay problems of thermal shock as noted in the Abstract [of Shinoda].” Applicant respectfully disagrees.

Applicant notes that the Examiner inadvertently referred to “Kusabiraki et al.” in the body of the rejection of Applicant’s Claims 6-12, and clearly should have correctly referred to “Shinoda” as identified in the statement of the rejection. Accordingly, Applicant has referred herein to “Shinoda” instead of “Kusabiraki et al.”

Contrary to the Examiner’s allegations, Kaida fails to teach or suggest that either of the frame members 35 and 36 of Kaida, which the Examiner alleged correspond to the first and second frame-shaped electrodes recited in Applicant’s Claims 6 and 12, are or could define an electrode. Since by definition, an electrode must be electrically conductive, and neither of the frame members 35 and 36 of Kaida are disclosed as being either an electrode or being made of electrically conductive material, Kaida certainly cannot be fairly construed as teaching or suggesting the features of “the first frame-shaped electrode” and “the second frame-shaped electrode” as recited in Applicant’s Claims 6 and 12.

In addition, Kaida fails to teach or suggest anything at all regarding the relative widths of the strip-shaped portion extending in the x direction and in the y direction of the frame members 35 and 36. Thus, Kaida clearly fails to teach or suggest the features of “when the difference in expansion in the x direction between the element and the substrate is represented by Q_x and the difference in expansion in the y direction between the element and the substrate is represented by Q_y , in each of the first frame-shaped electrode, the second frame-shaped electrode, and the solder sealing frame, a width of the strip-shaped portion extending in the direction having the larger difference in expansion is smaller than a width of the strip-shaped portion extending in the direction having the smaller difference in expansion” as recited in Applicant’s Claim 6, and similarly in Applicant’s Claim 12.

Shinoda was relied upon merely to teach a solder sealing frame, and certainly fails to teach or suggest the features of “the first frame-shaped electrode,” “the second frame-shaped electrode,” and “when the difference in expansion in the x direction between the element and the substrate is represented by Q_x and the difference in expansion in the y direction between the element and the substrate is represented by Q_y , in each of the first frame-shaped electrode, the second frame-shaped electrode, and the solder sealing frame, a width of the strip-shaped portion extending in the direction having the larger difference in expansion is smaller than a width of the strip-shaped portion extending in the direction having the smaller difference in expansion” as recited in Applicant’s Claim 6, and similarly in Applicant’s Claim 12.

Accordingly, Applicant respectfully submits that Kaida and Shinoda, applied alone or in combination, fail to teach or suggest the unique combination and arrangement of features recited in Applicant’s Claims 6 and 12.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claims 6 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Kaida in view of Shinoda.

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In view of the foregoing remarks, Applicant respectfully submits that Claims 6 and 12 are allowable. Claims 7-11 depend upon Claim 6, and are therefore allowable for at least the reasons that Claim 6 is allowable.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

To the extent necessary, Applicant petitions the Commissioner for a One-Month Extension of Time, extending to November 14, 2008, the period for response to the Office Action dated July 14, 2008.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Dated: November 7, 2008

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